

LDOE's Eureka Remediation Tools Session for Supervisors

Reflect on Your Beliefs About Math Remediation:

What do you believe students who are below grade level in math need to catch up?

What does it look like for students to catch up?

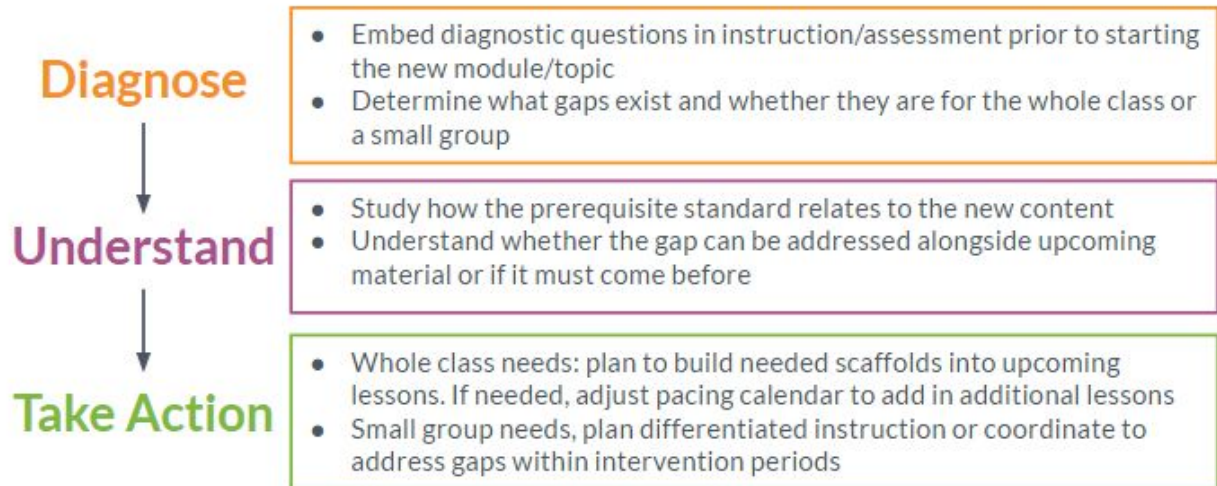
What math remediation practices have you observed to be ineffective?

STUDENT ACHIEVEMENT PARTNERS

Recommendations for Targeted Math Support and Interventions

Use this resource while addressing gaps in student understanding in both universal instruction and math interventions. Gain knowledge of common pitfalls schools fall into, and adjust approaches accordingly based on the recommendations below.

Common Misstep	Recommendation
Blindly adhering to a pacing guide/calendar	Use formative data to gauge student understanding and inform pacing
Halting instruction for a broad review	Provide just in time support within each unit or during intervention
Trying to address every gap a student has	Prioritize most essential prerequisite skills and understanding for upcoming content
Trying to build from the ground up or going back too far in the learning progression	Trace the learning progression, diagnose, and go back just enough to provide access to grade level material
Re-teaching students using previously failed methods and strategies	Provide a new experience for students to re-engage, where appropriate
Disconnecting intervention from content students are learning in math class	Connect learning experiences in intervention and universal instruction
Choosing content for intervention based solely on students' weakest areas	Focus on major work clusters from current or previous grades as it relates to upcoming content
Teaching all standards in intervention in a step-by-step, procedural way	Consider the aspect of rigor called for in the standards when designing and choosing tasks, activities, or learning experiences
Over-reliance on computer programs in intervention	Facilitate rich learning experiences for students to complete unfinished learning from previous or current grade



Grade 5 - Module 1 - Topic A Example

1. Diagnosis

Read the “Diagnostic Assessment” section on page 2 of the Tool.

Review the sample student work to determine where gaps exist.

2. Understand the Standard & How it Connects to Upcoming Material

Use guidance on p. 6 for 4.NBT.A.1:

- What component of rigor is addressed by this standard?
- How does that knowledge/skill connect to this 5th grade content in Module 1 - Topic A - Lesson 2?

NYS COMMON CORE MATHEMATICS CURRICULUM		Lesson 2 Exit Ticket	5•1
1. Solve.			
a.	$32.1 \times 10 =$	b.	$3632.1 \div 10 =$

3. Take Action

- Identify which prior grade lessons should be used, when, and with which students.
- Decide whether the gaps displayed by students should be addressed prior to starting this Module or if can they be filled alongside grade level content

Whole Class Approach - Taking Action Based on Diagnosis & Understanding Standards

- Address **minor gaps** by adding scaffolding and additional supports into the lessons
- Address **major gaps**:
 - For a majority of students: by adjusting your pacing calendar to insert 1-2 prerequisite lessons
 - For a specific group of students: by leveraging intervention or small group time

Reflect: What are the key actions needed to support students who may not be prepared to engage in the grade-level content of all Eureka lessons?

Leadership & School Structure Considerations

Is that lesson delicious? Why a curriculum is like a cookbook

by Michael B. Ripski, Ph.D., ANet Louisiana

Recently, I made pecan pie. In the cooking magazine where I found the recipe, the pie looked delectable. After quickly assembling the ingredients, I put the pie plate in the oven and waited with mouth-watering anticipation for the kitchen timer to ding.

But when I finally pulled it from the oven, the pie was soupy and too sweet. Those who have spent time in the kitchen know the feeling of culinary disappointment. Good recipes don't always turn out tasty.

The same holds true of teaching: a good curriculum doesn't necessarily lead to great instruction. Like that pecan pie, a curriculum needs to be studied, practiced, and adapted.

Many schools in states that have adopted Common Core State Standards are for the first time this year using a formalized curriculum. Previously, educators had been pulling together an assortment of lessons from various books and internet resources. It wasn't working.

Here in Louisiana, many schools are using the Eureka math series for their mathematics classrooms. Having a curriculum to match new, more rigorous standards came as a welcome resource to many teachers. What a relief, we thought, when curricula arrived.

But teachers soon struggled with the new guides. Like cooks trying out unfamiliar recipes, they had difficulty using their new curriculum effectively. Many teachers had the same questions: What am I really trying to accomplish with this set of lessons? What decisions do I need to make during the unit? What should I keep and what should I take out of this lesson?

In order to empower teachers to answer these questions, school leaders should set aside time to help their teachers do three things:

1. **Fully understand the standards in a curriculum unit or module.** In math, this means determining the focus standards for a unit, conducting a close read of those standards side by side with sample questions, and describing how the standards of focus connect to previously taught concepts or skills. As a check on this goal, teachers should be able to summarize in their own words what each major standard in a unit requires of students.
2. **Take the end-of-unit test and tag the questions to standards.** In order to understand the end goal for students, teachers answer and show their work for each question. Then, they identify which standard(s) the question is assessing. It's a straightforward, but critical exercise to build teachers' muscle memory so that they identify and link standards with how they're assessed.
3. This isn't about teaching to the test; it's about using assessments as a tool to understand standards more deeply. As they say, if you aren't clear about where you're going, you'll probably end up someplace else.
4. **Practice, internalize, and adapt daily lessons.** Teachers complete the problem they want students to master by the end of the class (e.g., the exit ticket), then identify the most important skill or concept in the lesson and the primary way the lesson's activities or strategies build that understanding. Holding that in mind, teachers anticipate student challenges and determine what needs to be cut or changed. Finally, teachers practice the lesson in collaborative planning time with their colleagues.

Focus Grade Level Standards

Develop understanding of fractions as numbers.

3.NF.1
Major

Understand a fraction $1/b$ as the quantity formed by 1 part when a whole is partitioned into b equal parts; understand a fraction a/b as the quantity formed by a parts of size $1/b$.

3.NF.2
Major

Understand a fraction as a number on the number line; represent fractions on a number line diagram.

a. Represent a fraction $1/b$ on a number line diagram by defining the interval from 0 to 1 as the whole and partitioning it into b equal parts. Recognize that each part has size $1/b$ and that the endpoint of the part based at 0 locates the number $1/b$ on the number line.

b. Represent a fraction a/b on a number line diagram by marking off a lengths $1/b$ from 0. Recognize that the resulting interval has size a/b and that its endpoint locates the number a/b on the number line.

3.NF.3

Major

Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size.

multiple ways of showing same shaded portions not all next to each other

2, 3, 4, 6, + 8

how big is b ?

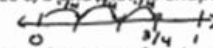
Show visuals - have students describe $2/3$ + what the

have a value

represent

multiple fractions on same # line

know $1 + \frac{4}{4}$ are same place on # line



Example of Goal 1: Teacher's annotation of standards

At a dinner party next week, my guests will enjoy an apple pie that I'm confident will be delicious. It's a recipe I've already tried on for size and know that it's best made with a bit more butter, a little less sugar, and cooked for 5 minutes longer than the recipe calls for.

For teachers who have taken time to understand the standards underlying their curriculum and practiced their lessons, I know their teaching will be just as tasty.

Key Considerations

Do you require a strict pacing guide where a teacher could “get in trouble” for adding in a prerequisite lesson? Do you also hold teachers accountable for getting to grade-level content?	
What communication and co-planning or data analysis takes place with the core math teacher and interventionists so that their support aligns with the core content needs?	
Do you have allocated time for teachers to get support internalizing & adapting Eureka modules and lessons?	
Are leaders using myANet’s standards pages before/during observations to get clear on the right math content and rigor?	
Do teachers get feedback on unit/lesson plans in time to revise?	

Maximizing Use of Intervention Time

- Standards-aligned work (even if below grade level standards)
- Communication rhythms on plans and data between core math teacher and intervention teachers
- Assessing the quality, alignment, and effectiveness of current intervention programs
- Including intervention teachers in math PD

Using Eureka Well

- Module Level Planning
 - Study the standards
 - Take & tag the end of module assessment
- Daily Planning
 1. Identify and dig into the targeted standard(s)
 2. Annotate the lesson, working every problem to get clear on desired understandings, potential modifications, and facilitation moves.
 3. Determine remediation needs and approaches to support students who miss the

exit ticket items.

Reflection/Planning Time

- **Plan how the Eureka Remediation Tools will be used:**
 - How will you ensure all math teachers know about these tools and are prepared to use them effectively?
 - What specific parameters will you give around implementation (the who and the when)?

- **Take action:**
 - What are your 3 specific next steps to make this happen? Consider when and how you'll train and communicate this to all relevant staff.

- **Make this coherent for your teachers:**
 - In a bigger picture sense, where does your school most need to improve about Eureka curriculum or math intervention?
 - What's your big priority for math instruction in 2017-18 and how does this fit in?